

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Thomas W. Hodge, Natalie J. Morey, Michael W. Shaw, Donald Rubin, and Anthony Sanchez

Application No. 10/535,523

Filed: May 17, 2005

Confirmation No. Currently unknown

For: CELL LINES AND HOST NUCLEIC ACID SEQUENCES RELATED TO INFECTIOUS DISEASE

Examiner: Not yet assigned

Art Unit: Not yet assigned

Attorney Reference No. 6395-66741-06

COMMISSIONER FOR PATENTS
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450

**SUBSTITUTE POWER OF ATTORNEY
AND
CHANGE OF CORRESPONDENCE ADDRESS**

Dear Sir:

THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, CENTERS FOR DISEASE CONTROL AND PREVENTION and VANDERBILT UNIVERSITY, are the assignees of an undivided interest in the entire right, title and interest in the above-identified patent application, as evidence by the Assignments attached hereto.

The Assignees hereby revoke all former Powers of Attorney and appoint as their representatives to conduct all business in the Patent and Trademark Office connected therewith the attorneys and agents identified as

Customer Number 46135

Please address all correspondence to **Customer Number 46135** at:

KLARQUIST SPARKMAN, LLP
One World Trade Center, Suite 1600
121 SW Salmon Street
Portland, OR 97204-2988
Telephone: 503-226-7391
Fax: 503-228-9446

The Assignments attached to this Substitute Power of Attorney have been reviewed by the undersigned. The undersigned certifies that to the best of the undersigned's knowledge and belief, title is in the assignees.

The Centers for Disease Control and Prevention Technology Transfer Office has been duly delegated responsibility for such patent matters under the authority of the memorandum dated January 31, 1997, from Donna E. Shalala, the Secretary of the Department of Health and Human Services, delegating the authority to the Heads of the Public Health Service Operating Divisions, as well as a memorandum dated October 12, 2000, from Jeffrey P. Koplan, M.D., M.P.H., the Director of the Centers for Disease Control and Prevention (who is a Head of a Public Health Service Operating Division), delegating authority to sign this Power of Attorney to the Associate Director for Science and the Director of the Technology Transfer Office of the Centers for Disease Control and Prevention. The undersigned is authorized to exercise such authority in this matter.

Executed on _____, 2005, at Atlanta, Georgia.

UNITED STATES DEPARTMENT OF
HEALTH AND HUMAN SERVICES

Andrew Watkins
Director, Technology Transfer Office
Centers for Disease Control and Prevention
(CDC)
1600 Clifton Road NE (E67)
Atlanta, GA 30333
(404) 639-6270

Executed on Sept. 14, 2005, at Nashville, Tennessee.

VANDERBILT UNIVERSITY

Janis Elsner

Janis Elsner

Associate Director

Office of Technology Transfer and

Enterprise Development

1207 17th Ave. S., Suite 105

Nashville, TN 37212

(615) 343-2430

ASSIGNMENT

We, Thomas W. Hodge, of 9115 Twelevestones Dr., Roswell, Georgia 30076, a citizen of the United States of America and Michael W. Shaw, of 2614 Willow Cove, Decatur, Georgia 30033-2200, a citizen of the United States of America, and Anthony Sanchez, of 1717 Red Fox Run, Lilburn, Georgia 30047, a citizen of the United States of America, employees of the Department of Health and Human Services at the time the invention was made, along with Natalie J. Morey, of 3138 Caldwell Rd. NE, Atlanta, Georgia 30319-2918, a citizen of the United States of America and Don Rubin, of 1129 Hardinghill Lane, Nashville, Tennessee 37215, a citizen of the United States of America have invented CELL LINES AND HOST NUCLEIC ACID SEQUENCES RELATED TO INFECTIOUS DISEASE for which the following patent applications have been filed:

U.S. Provisional Patent Application No. 60/427,464, filed on November 18, 2002;
U.S. Provisional Patent Application No. 60/482,604, filed on June 25, 2003;
PCT Application No. PCT/US03/37143 filed on 18 November 2003; and

all of which applications are collectively referred to herein as "the patent applications."

The conditions under which said invention was made are such as to entitle the Government of the United States of America under Paragraph 1(a) of Executive order 10096, to our entire right, title, and interest in the invention, both in the United States and in other countries throughout the world.

The Government of the United States of America desires to acquire our domestic and foreign right, title, and interest in the aforesaid invention described in the aforesaid provisional patent application; and

In consideration of these obligations and other valuable considerations, we the undersigned, have sold, assigned, and transferred and do sell, assign, and transfer to The Government of the United States of America as represented by the Secretary of the Department of Health and Human Services, Centers for Disease Control and Prevention (hereinafter THE GOVERNMENT), and his successors, our full and exclusive right, title, and interest in the invention, patent application and patent rights throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file patent applications on the invention described in the aforesaid application, and all Letters Patents and Registrations which may be granted for corresponding non-provisional patent applications on the same in the United States of America and all countries throughout the world, and to claim the priority from the application as provided by United States law and the Paris Convention, or of any divisional, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

AND, we authorize and request issuance of said Letters Patent to THE GOVERNMENT as an assignee of our entire right, title, and interest in and to the same throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file, for the sole use for the full term or terms for which said Letters Patent and Registrations may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof which may be granted as fully and entirely as the same would have been held by us, had this assignment not been made;

AND, we warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied with respect to the aforesaid provisional patent application or corresponding application for Letters Patent which will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of this instrument by us;

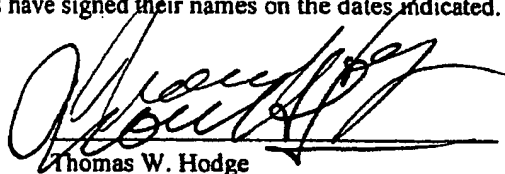
AND, we agree to execute any and all applications for Letters Patent in the United States of America and foreign countries, and to furnish and deliver to the Secretary, Department of Health and Human Services, upon request, all data and documents, and to execute any papers which may be necessary for the prosecution of any application or applications of Letters Patent or for THE GOVERNMENT to exercise its rights granted hereunder, including communicating to THE GOVERNMENT, its representatives or agents, any facts relating to said invention, including evidence for interference purposes, or for other proceedings, whenever requested, to testify in any interference or other proceedings, whenever requested, and to execute and deliver on request all lawful papers required to make any of the foregoing provisions effective, and likewise make these provisions binding upon our heirs, legal representatives, administrators and assigns, and we shall assist THE GOVERNMENT in every way as may be requested in protecting said invention, provided that any expense of extending such assistance shall be paid by THE GOVERNMENT.

We authorize THE GOVERNMENT to file and prosecute this patent application, as well as any corresponding applications that claim priority from it. THE GOVERNMENT has the right to select attorneys or agents of its choice to prosecute these applications on its behalf.

We grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Assignment any further information which may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignors have signed their names on the dates indicated.

Dated: 5-5-04

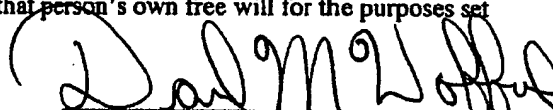

Thomas W. Hodge

STATE OF GEORGIA)
COUNTY OF DEKALB) ss.

This 5 day of May, 2004, before me personally came the above-named Thomas W. Hodge, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

[SEAL]




Notary Public for CDC PCU
My commission expires: 2-14-06

Dated: 5/5/04

STATE OF Georgia
Dekalb

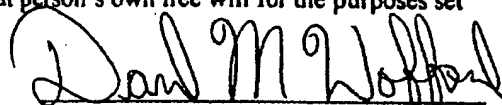
COUNTY OF Dekalb) ss.


Michael W. Shaw

This 5 day of April, 2004, before me personally came the above-named Michael W. Shaw, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

[SEAL]




Notary Public for CDC FCU
My commission expires: 2-14-06

Dated: _____

STATE OF _____)

COUNTY OF _____) ss.

Anthony Sanchez

This ___ day of _____, 2004, before me personally came the above-named Anthony Sanchez, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

[SEAL]

Notary Public for _____
My commission expires: _____

Dated: _____

Michael W. Shaw

STATE OF _____)
) ss.
COUNTY OF _____)

This ____ day of _____, 2004, before me personally came the above-named Michael W. Shaw, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

Notary Public for _____
My commission expires: _____

[SEAL]

Dated: May 5, 2004
STATE OF Georgia)
) ss.
COUNTY OF DeKalb)

Anthony Sanchez
Anthony Sanchez

This 5th day of May, 2004, before me personally came the above-named Anthony Sanchez, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

Voughan S. Trade
Notary Public for _____
My commission expires: Jan 9, 2006

[SEAL]

m 1-28-04

3924 Jm 1-28-04

2333 Ewing Dr. NE
3138 Caldwell Rd. NE
ASSIGNMENT

I, Natalie J. Morey, of 3138 Caldwell Rd. NE, Atlanta, Georgia 30319-2948, a citizen of the United States of America, along with Thomas W. Hodge, of 9115 Twestones Dr., Roswell, Georgia 30076, a citizen of the United States of America, Michael W. Shaw, of 2614 Willow Cove, Decatur, Georgia 30033-2200, a citizen of the United States of America, Don Rubin, of 1129 Hardinghill Lane, Nashville, Tennessee 37215, a citizen of the United States of America and Anthony Sanchez, of 1717 Red Fox Run, Lilburn, Georgia 30047, a citizen of the United States of America have invented CELL LINES AND HOST NUCLEIC ACID SEQUENCES RELATED TO INFECTIOUS DISEASE for which the following patent applications have been filed:

U.S. Provisional Patent Application No. 60/427,464, filed on November 18, 2002;
U.S. Provisional Patent Application No. 60/482,604, filed on June 25, 2003;
PCT Application No. PCT/US03/37143 filed on 18 November 2003; and

all of which applications are collectively referred to herein as "the patent applications."

The Government of the United States of America desires to acquire my domestic and foreign right, title, and interest in the aforesaid invention described in the aforesaid provisional patent application; and

In exchange for valuable considerations outlined in the Centers for Disease Control Royalty Policy, I the undersigned, have sold, assigned and transferred and do assign and transfer to The Government of the United States of America as represented by the Secretary of the Department of Health and Human Services, Centers for Disease Control and Prevention (hereinafter THE GOVERNMENT), and his successors, my full and exclusive right, title, and interest in the invention, patent application and patent rights throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file patent applications on the invention described in the aforesaid application, and all Letters Patents and Registrations which may be granted for corresponding non-provisional patent applications on the same in the United States of America and all countries throughout the world, and to claim the priority from the application as provided by United States law and the Paris Convention, or of any divisional, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

AND, I authorize and request issuance of said Letters Patent to THE GOVERNMENT as an assignee of my entire right, title, and interest in and to the same throughout the United States of America, its territories and dependencies, and within each and every foreign country in which THE GOVERNMENT elects to file, for the sole use for the full term or terms for which said Letters Patent and Registrations may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof which may be granted as fully and entirely as the same would have been held by me, had this assignment not been made;

AND, I warrant that there are no outstanding assignments, grants, liens, encumbrances, or agreements either written, oral, or implied with respect to the aforesaid provisional patent application or corresponding application for Letters Patent which will impair, diminish, limit, or abridge the interest herein conveyed at the time of the execution of this instrument by me;

AND, I agree to execute any and all applications for Letters Patent in the United States of America and foreign countries, and to furnish and deliver to the Secretary, Department of Health and Human Services, upon request, all data and documents, and to execute any papers which may be necessary for the prosecution of any application or applications of Letters Patent or for THE GOVERNMENT to exercise its rights granted hereunder, including communicating to THE GOVERNMENT, its representatives or agents, any facts relating to said invention, including evidence for interference purposes, or for other proceedings, whenever requested, to testify in any interference or other proceedings, whenever requested, and to execute and deliver on request all lawful papers required to make any of the foregoing provisions effective, and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns, and I shall assist THE GOVERNMENT in every way as may be requested in protecting said invention, provided that any expense of extending such assistance shall be paid by THE GOVERNMENT.

I authorize THE GOVERNMENT to file and prosecute this patent application as well as any corresponding applications that claim priority from it. THE GOVERNMENT has the right to select attorneys or agents of its choice to prosecute these applications on its behalf.

I grant the law firm of Klarquist Sparkman, LLP, the power to insert on this Assignment any further information which may be necessary or desirable in order to comply with all applicable legal requirements, including the rules of the United States Patent and Trademark Office, for submitting and recording this document.

IN TESTIMONY WHEREOF, Assignor has signed her name on the date indicated.

Dated: 1-28-2004

Natalie J. Morey
Natalie J. Morey

STATE OF GEORGIA)
COUNTY OF DEKALB) ss.

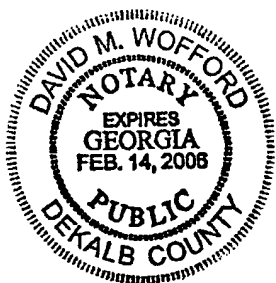
This 28 day of JAN, 2004, before me personally came the above-named Natalie J. Morey, who executed the foregoing Assignment in my presence, and who acknowledged to me that it was executed under that person's own free will for the purposes set forth therein.

David M. Wofford

Notary Public for COC

My commission expires: 2-14-06

[SEAL]



Don 3/4/04
Donald H. Rubin
ASSIGNMENT *3/4/04*

WHEREAS, I, Don Rubin, of 1128 ~~Harding~~^{Hill} Lane, Nashville, Tennessee 37215, a citizen of the United States of America, along with Thomas W. Hodge, of 9115 Twelevestones Dr., Roswell, Georgia 30076, a citizen of the United States of America, Natalie J. Morey, of 3138 Caldwell Rd. NE, Atlanta, Georgia 30319-2918, a citizen of the United States of America, and Michael W. Shaw, of 2614 Willow Cove, Decatur, Georgia 30033-2200, a citizen of the United States of America, and Anthony Sanchez, of 1717 Red Fox Run, Lilburn, Georgia 30047, a citizen of the United States of America have invented new and useful improvements in CELL LINES AND HOST NUCLEIC ACID SEQUENCES RELATED TO INFECTIOUS DISEASE for which U.S. provisional application, Serial No. 60/427,464 was filed on November 18, 2002, U.S. provisional application, Serial No. 60/482,604 was filed on June 25, 2003 and PCT International Application No. PCT/US03/37143 was filed on November 18, 2003; and

WHEREAS, VANDERBILT UNIVERSITY, whose post-office address is Office of Technology Transfer and Enterprise Development, 1207 17th Ave. S., Suite 105, Nashville, TN 37212, U.S.A., is desirous of acquiring my entire interest in the same;

NOW, THEREFORE, for good and valuable consideration, as described in the Policy on Technology and Literary and Artistic Works in the Vanderbilt University Faculty Manual, the sufficiency and adequacy of which are hereby acknowledged, I, Don Rubin, sell, assign and transfer unto said VANDERBILT UNIVERSITY, my entire right, title and interest in and to said invention and application(s) throughout the world, including, without limitation, any Letters Patent which may issue thereon, and any subsequent application(s) claiming priority

to the above-identified application(s) under 35 U.S.C. § 19(e), reissue, reexamination, division, continuation-in-part, extension or continuation thereof and all rights of priority under the International Convention arising from said application(s); the same for its legal representatives and assigns, as fully and entirely as the same would have been held by me had this assignment and sale not been made;

AND, I hereby bind myself, my heirs, legal representatives, administrators and assigns property to execute without further consideration any and all applications, petitions, oaths and assignments or other papers and instruments which may be necessary in order to carry into full force and effect, the sale, assignment, transfer and conveyance hereby made or intended to be made and generally do everything possible to aid VANDERBILT UNIVERSITY, its legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries throughout the world.

I also authorize counsel for VANDERBILT UNIVERSITY to enter above the filing date and serial number of the application when they become available.

IN WITNESS WHEREOF, I have executed this Assignment this 9th day
of March, 2004.

Don Rubin (L.S.)
Donald H Rubin

State of Tennessee
County of Davidson

On this 9th day of March, 2004, before me, a Notary Public, came
Don Rubin, to me known and known to be the individual described in and who executed the
foregoing assignment, and he/she duly acknowledged the same to be his/her free act and
deed.

Martha L Reed
Notary Public

My Commission Expires: 5-30-04

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